



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/757,807 | 01/13/2004 | John L. Schantz | 200310109-1 | 5415 |

| | | |
|--|------|------------|
| 22879 | 7590 | 02/05/2008 |
| HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400 | | |

| | |
|--------------|--|
| EXAMINER | |
| PARK, JUNG H | |

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
| 2619 | |

| | |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
| 02/05/2008 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary

Application No.

10/757,807

Applicant(s)

SCHANTZ, JOHN L.

Examiner

Jung Park

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/21/07 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Remark

1. This communication is considered fully responsive to the Amendment mailed on 11/21/2007.

- a. An objection to the drawing is withdrawn since it is being amended accordingly.

- b. The rejection under 112 2nd is not withdrawn since it is not being amended accordingly even though applicant provides the definition of "a point code".

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 9, what is mean by "the first signaling GW and the second signaling GW being associated with a single SS7 point code"?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al. (US 2004/0022237, "Elliott") in view of Dantu et al. (US 7006433, "Dantu").

Regarding claim 1, Elliott discloses an arrangement for coupling a SCP (Signaling Control Point) to signaling transfer point (STP) nodes of a SS7 network, comprising:

- an aggregated signaling gateway arrangement (ASGA) (network arrangement, see 104 fig.5A) including at least a first signaling gateway (SS7 gateway, see 208 fig.5A) and a second signaling gateway (SS7 gateway, see 210 fig.5A), the first signaling gateway being coupled between the SCP (SCP, see 214 fig.2A) and a first STP node (STP, see 250 fig.2A) of the SS7 network (fig.2A), the second signaling gateway being coupled between the SCP (SCP, see 214 fig.2A) and a second STP node (STP, see 252 fig.2A) of the SS7 network.

Elliott does not explicitly disclose, "the first signaling gateway and the second gateway being associated with a single SS7 point code". However, Elliott discloses that Soft switch has a point code and an alternate code (see 114 & 529 fig.5A; ¶.608, ln.12-15) and it is not required to have an alternative code point when the communication network system has reliability. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply only a single Soft Switch point code, i.e., a single SS7 point code corresponding to a single Soft Switch point code, in order to have benefits from economies of scale by requiring less interconnection link.

Regarding claim 2, Elliott discloses voice-over-IP network using SS7 gateway (fig.2A and ¶.451), but lacks what Dantu discloses, "wherein the first signaling gateway and the second signaling gateway communicate with the SCP using SS7-over-IP (SS7-

over-IP, see col.2, ln.32-60)." Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply Stream Control Transmission Protocol (SCTP) for transmitting SS7 signaling message across the network elements, i.e., SS7-over-IP, taught by Dantu into the network of Elliott in order to provide high reliability and high availability network (see col.2, ln.32-60).

Regarding claim 3, Elliott discloses, "wherein the first signaling gateway communicates with the first STP node using HSL (High Speed Link) (high speed packet switch, see ¶.645)."

Regarding claim 4, Elliott discloses, "wherein all communication links employed for transmitting SS7 messages between the first STP node and the SCP traverse the first signaling gateway (fig.2A and ¶.522, table 1)."

Regarding claim 5, Elliott discloses the 84 HSL links (¶.645), but does not explicitly disclose, "wherein the ASGA is capable of providing 32 HSL links of bandwidth into the SS7 network." However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply 32 HSL links of bandwidth in order to provide more flexibility according to network designer's need and such a modification would only require a simple change of existing links.

Regarding claim 6, it is a claim corresponding to claim 4 and is therefore rejected for the similar reasons set forth in the rejection of claim 4.

Regarding claim 7, Elliott lacks what Dantu discloses, "wherein each SS7 link between the SCP and the ASGA is mapped onto a SCTP (Stream Control Transport Protocol) connection (col.2, ln.38-41)." This claim is rejected for the same reasons and motivation set forth in the rejection of claim 2.

Regarding claim 8, it is a claim corresponding to claims 1 & 2 except the limitation of "an application server (a special application computer, see 214 fig.2A and ¶.11)" and is therefore rejected for the similar reasons set forth in the rejection of claims 1 and 2.

Regarding claim 9, Elliott discloses, "wherein the first signaling gateway and the second gateway are associated with a single SS7 point code (a single point code of a single SCP or Soft Switch associated with the first and second gateway, see 214 and 204 fig.2A)."

Regarding claims 10-13, they are claims corresponding to claims 5, 3, 6, and 7, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 14, Elliott discloses that Digital PBX provides 24 digital channels at 56K per DS0, but does not explicitly disclose, "wherein the second signaling gateway communicates with the second STP node using 56 Kbits/second SS7 links." However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply 56 Kbps SS7 links between the second signaling gateway and the

second STP node to access Public Switched Telephone Network (PSTN) in order to provide more flexibility according to network designer's need and utilize the existed equipments to save cost and provide same service to current customers who satisfy with the low speed network equipments.

Regarding claim 15, it is a claim corresponding to claims 1 & 2 and is therefore rejected for the similar reasons set forth in the rejection of claims 1 and 2.

Regarding claims 16, 18, 19, 20, 21, & 22, they are claims corresponding to claims 9, 3, 6, 7, 3, & 14, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 17, Elliott lacks what Dantu discloses, "wherein the ASGA is capable of providing a greater bandwidth throughput into the SS7 network than a maximum bandwidth throughput into the SS7 network of either one of the first signaling gateway and the second signaling gateway (not disrupt or degrade the capabilities of the signaling network, see col.2, ln.40-43). This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 23, Elliott discloses the backup call path (¶.1495), but does not explicitly disclose, "wherein the first signaling gateway is coupled to the first STP node via at least one active HSL link and at least one inactive 56 Kbits/second link." That is, there is a need to have a backup-signaling link for high-speed links for preventing network failure as taught by Elliott. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of applicant's invention to include one active HSL link for data transfer and at least one inactive link as a backup link. The motivation of using one inactive low speed link as a backup link is to save cost by using one of low speed links by utilizing the existed old link only for signaling.

Response to Arguments

6. Applicant's arguments filed have been fully considered but they are not persuasive.

At pages 9, 11, and 13, with respect to claims 1, 8, and 15, applicant argues that Elliott fails to disclose the limitations of "an aggregated signaling gateway arrangement (ASGA) including at least a first signaling gateway and a second signaling gateway, the first signaling gateway being coupled between the SCP and a first STP node of the SS7 network, the second signaling gateway being coupled between the SCP and a second STP node of the SS7 network."

In reply, the Examiner suggests that applicant should explicitly point out what limitations are not disclosed by the reference. Elliott discloses signaling gateway network arrangement as described in 104 Fig.5A including a first signaling gateway 208 fig.5A and a second signaling gateway 210 fig.5A. The first signaling gateway being coupled between the SCP 214 fig.2A and a first STP node 250 fig.2A of the SS7 network fig.2A, the second signaling gateway being coupled between the SCP 214 fig.2A and a second STP node 252 fig.2A of the SS7 network. Elliott does not explicitly disclose, "the first signaling gateway and the second gateway being associated with a single SS7 point code". However, Elliott discloses that Soft switch has a point code and an alternate code as described in 114 & 529 Fig.5A and ¶.608, ln.12-15 and it is not required to have an alternative code point when the communication network system has reliability.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply only a single Soft Switch point code, i.e., a single SS7 point code corresponding to a single Soft Switch point code, in order to have benefits from economies of scale by requiring less interconnection link. Therefore, the examiner respectfully disagrees.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 6:15-3:45.

Application/Control Number:
10/757,807
Art Unit: 2619

Page 9

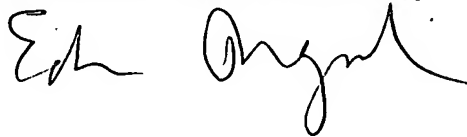
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jung Park
Patent Examiner

EDAN . ORGAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Edan Orgad', written over the printed name and title.